



Transition to Release B

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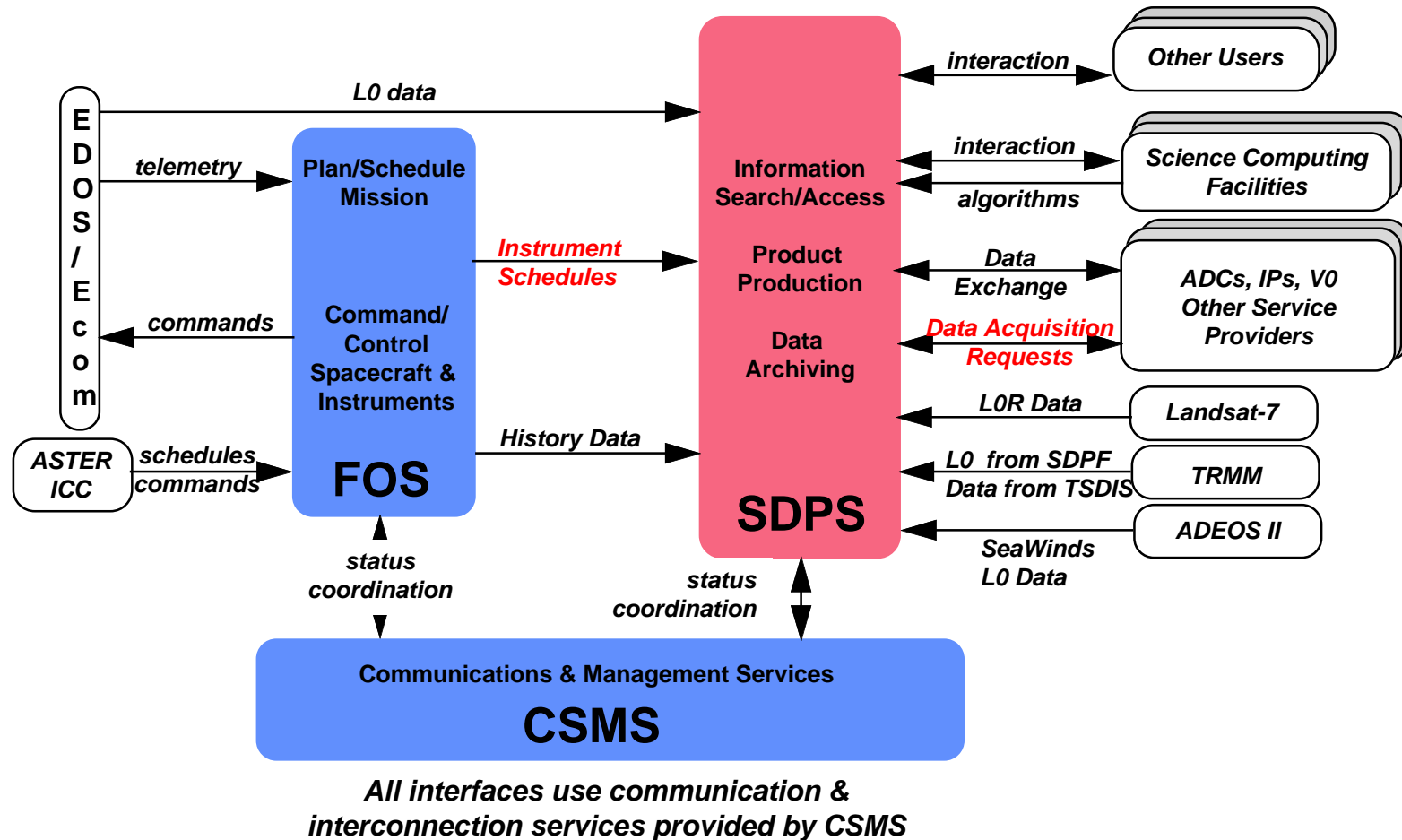
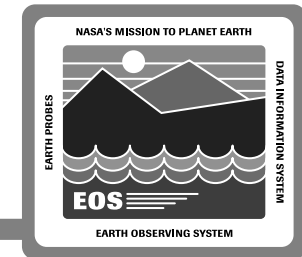
Design Review

New and Extended Services

Documentation List

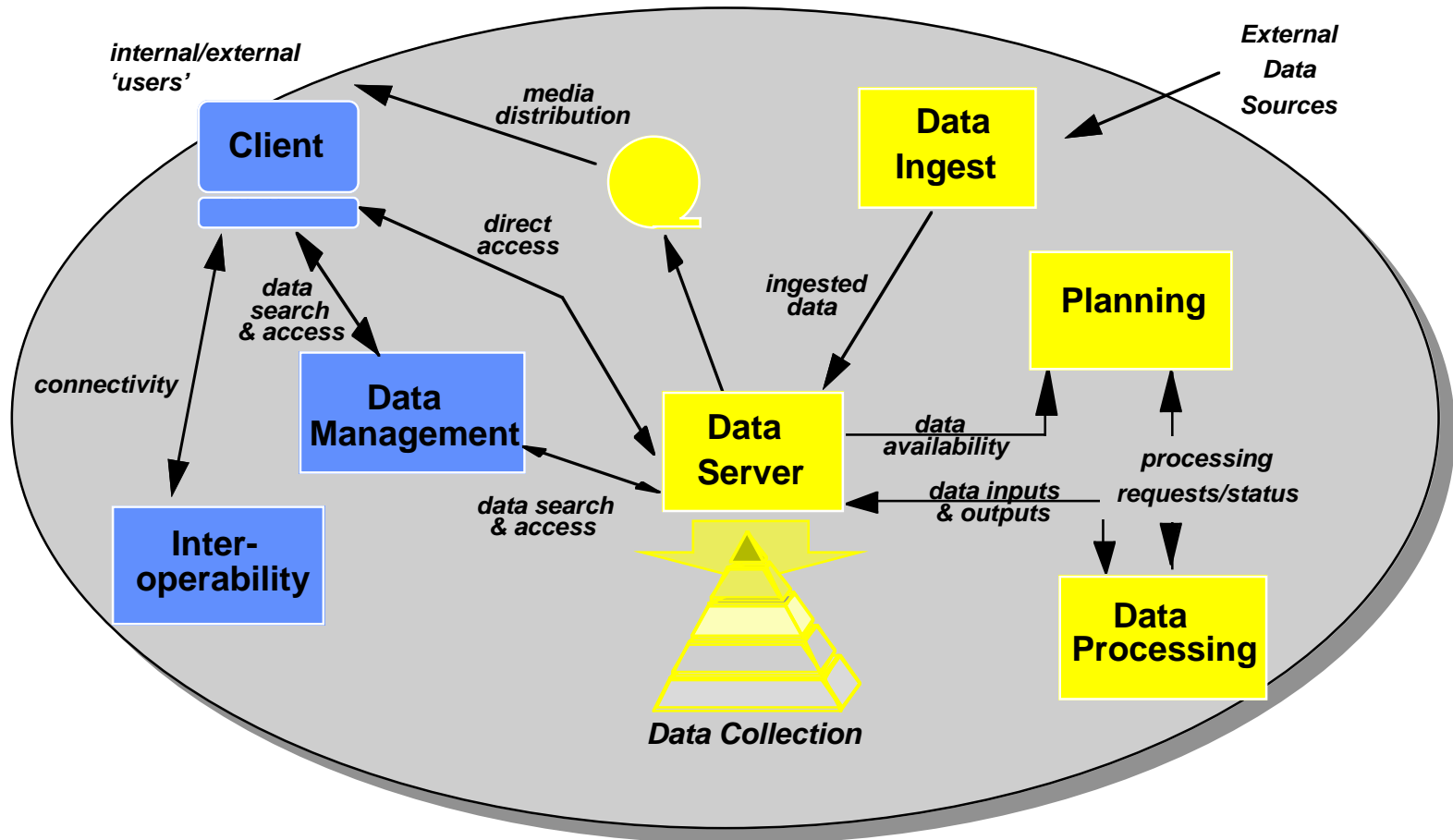
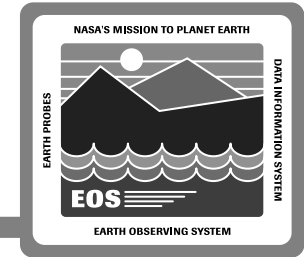
A/B Coordination Mechanisms

ECS Subsystem Context

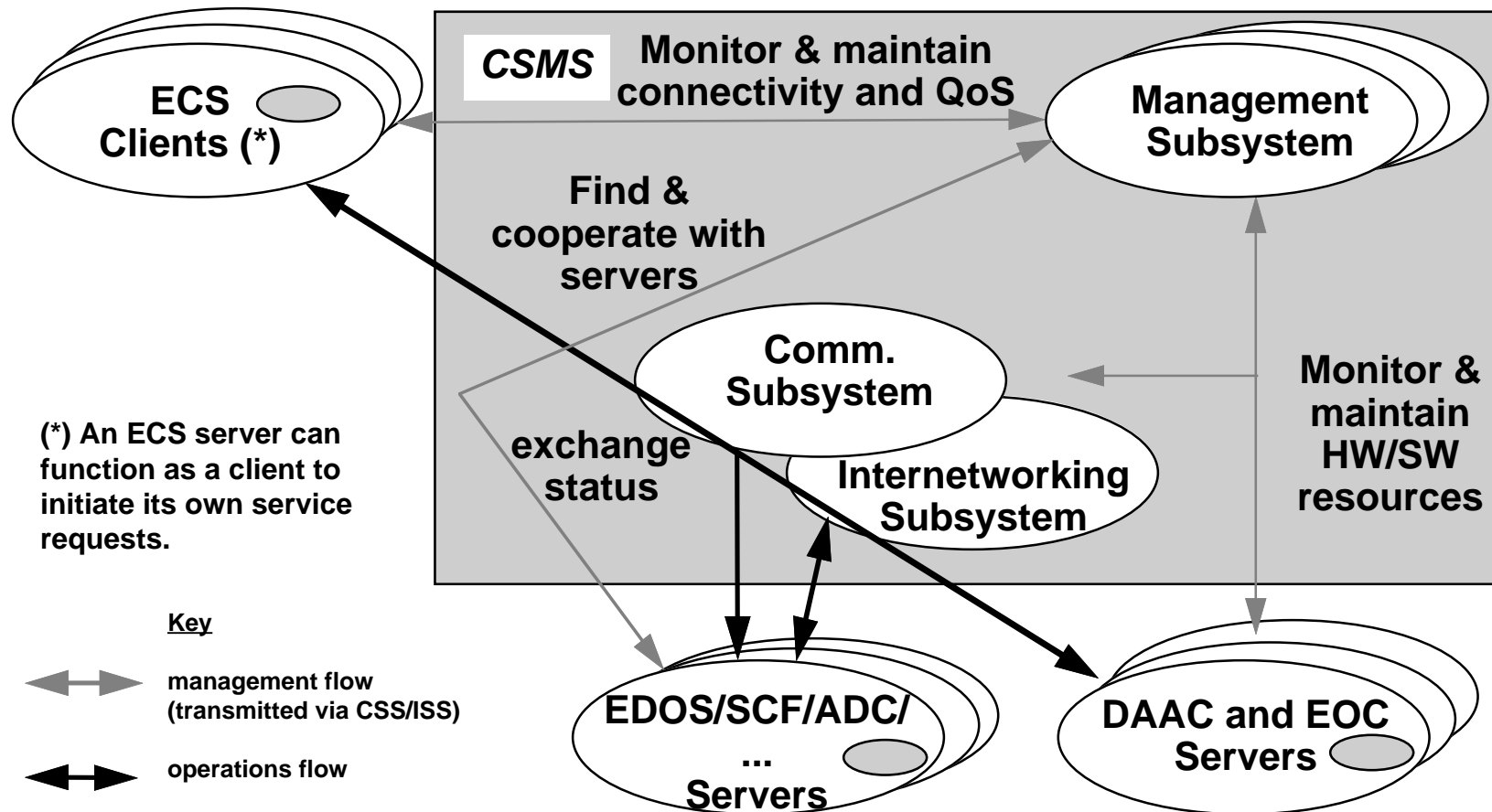
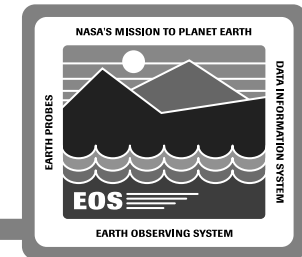


SDPS Architecture

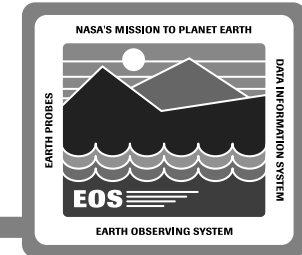
Subsystem Interaction Overview



CSMS Subsystems

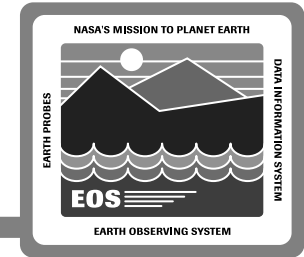


Current LOC Estimates

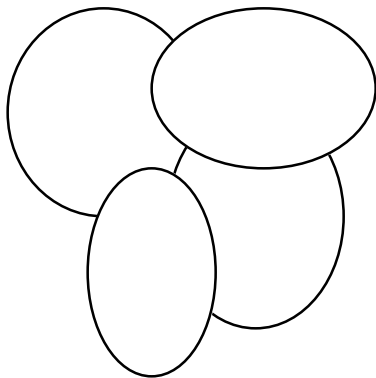


Subsystem	IR-1	A	B	C/D
Client (CLS)	0	2,800	35,000	0
Interoperability (IOS)	0	11,700	2,000	1,000
Data Management (DMS)	0	8,600	17,700	7,700
Data Server (DSS)	0	56,075	48,400	16,000
Ingest (INS)	3,000	20,000	9,000	1,000
Planning (PLS)	0	18,000	8,950	4,830
Data Processing (DPS)	42,480	26,760	18,800	16,100
Communications (CSS)	13,000	43,500	47,000	98,000
Management (MSS)	4,500	23,500	30,000	31,000
Total	62,980	210,935	216,850	175,630

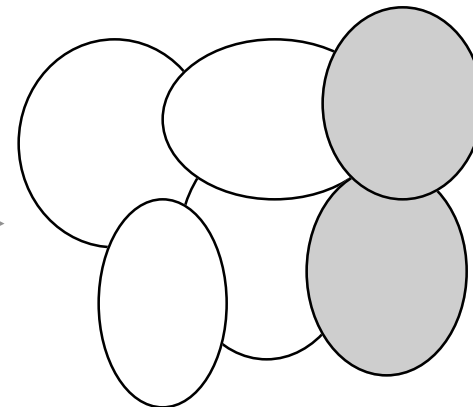
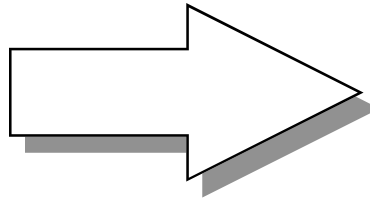
Development Methodology



Where Rel-B extends functionality of a Rel-A, the design goal will be to add new functions vs modifying existing design and/or code

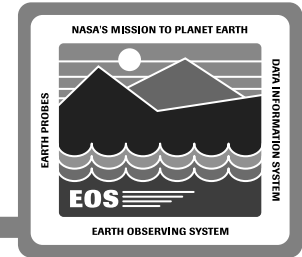


Rel A Subsystem



Augmented Rel B Subsystem

A/B Relationships



Rel B Enhancement

More robust multi-DAAC planning and scheduling, support to inter-DAAC resource conflict resolution via use of common planning data; support to Targets of Opportunity (TOOs)

Greatly increased (by at least an order of magnitude) maximal network data rates, data processing and required data product storage, especially for AM-1 mission support.

Version 1 ECS client

Enhanced Release A ESN WAN to support additional data traffic requirement for Release B.

Rel A Dependency

Basic inter-DAAC planning and scheduling

Moderate data rates, data processing and data storage.

Use of Version 0 client capability.

Use of Release A ESN WAN for inter-DAAC Communications

A/B Relationships (cont.)



Rel B Enhancement

Enhanced Local Information Manager (LIM) capabilities and implementation of Distributed Information Manager (DIM) capabilities; enhanced management reporting capabilities

Enhanced processing on demand versus simply storage and retrieval from archive

Robotic control of file servers; enhanced attached storage capability; APIs for scientists to gain access to data storage and retrieval services

Enhanced metadata capabilities - expandable metadata attributes and geographic metadata search, including World Reference System parameters

Rel A Dependency

Basic local information and resources management

Minimal processing (and reprocessing) on demand

Basic data storage and retrieval capabilities

Basic metadata generation and search

A/B Relationships (cont.)



Rel B Enhancement

System & Network Management to include additional security features and DAACs interfaces (especially the ASTER GDS and ASF support).

Enhanced OODCE support with additional DCE services

SMC integrated with LSM. SMC capabilities for the security management, fault management and performance management are automated.

Increased automated data accounting and handling of Data Availability Notices (DANs) from EDOS and from the ASTER GDS

Rel A Dependency

System & Network Management for Release A network configuration

Basic OODCE capability

SMC activated. Many of the SMC capabilities are performed manually.

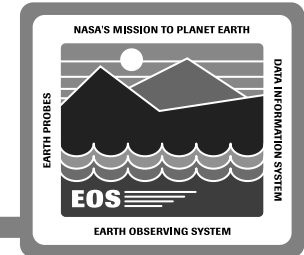
Basic data accountability and data delivery verification

Release A/B Coordination



- **Document Relationships**
- **Processes**
- **Sync Points**

IDR Documentation



207/SE1	ECS System Design Specification
211/SE3	Trade-off Studies Analytical Data
307/329/DV2	Segment/Element Release Plan
319/DV1	Segment/Element Integration and Test Plan
304/DV1	Segment Requirements Specification
209/SE2	External ICDs
604/OP1	ECS Operations Concept Document
313/DV3	ECS Internal ICDs
305/DV3	Segment Design Specification
330/DV1	Detailed Segment Description
402/VE1	ECS System Integration and Test Plan
311/DV1	Database Design Specifications and Database Schema
220/SE1	Communications Requirements

Document Relationships



Key Design Documents:

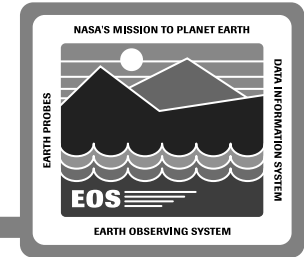
- **DID 305 - Segment Design Specification** (PDR/IDR/CDR/RRR)
- **DID 307/329 - Release and Development Plans** (PDR/IDR)
- **DID 313 - ECS Internal ICDs** (PDR/IDR/CDR)
- **DID 311 - Database Design Spec** (PDR/IDR)

Database Design Specification and Database Schema (DID 311) will be maintained by SCDO's Multi-release Support Group (SCDO/MRS).

The Release and Development plans are sequential and built on top of the previous release.

Document growth must, and will be, linear and maintained so that release specific growth can be identified

Coordination Mechanisms



Cross Release Coordination Team maintains the big picture

- ECS Chief Engineer (chair)
- SCDO manager (co-chair)
- SMO/TSO managers
- Release Managers
- Lead Release Engineers
- Multi-mission support manager

Interlocked Change Control Boards (CCBs) maintain multi-level baselines

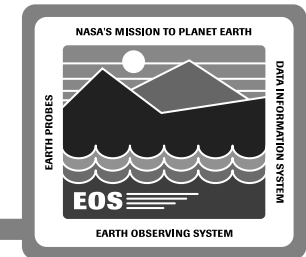
- The ECS CCB controls all release mission statements, L3 RBRs, and ICDs and core volume of the segment design document (DID 305)
- Each Release CCB controls its applicable L4 rqmts and release specific design volumes

Engineers work together to make strategies work and to discover early, any technical obstacles to reuse

- Frequent coordination meetings at the subsystem level
- Periodic *synch* points where the design relationships are examined

CASE tools (RTM and OMT) will be subject to configuration management, and will be used as a check for *design/requirement drift*

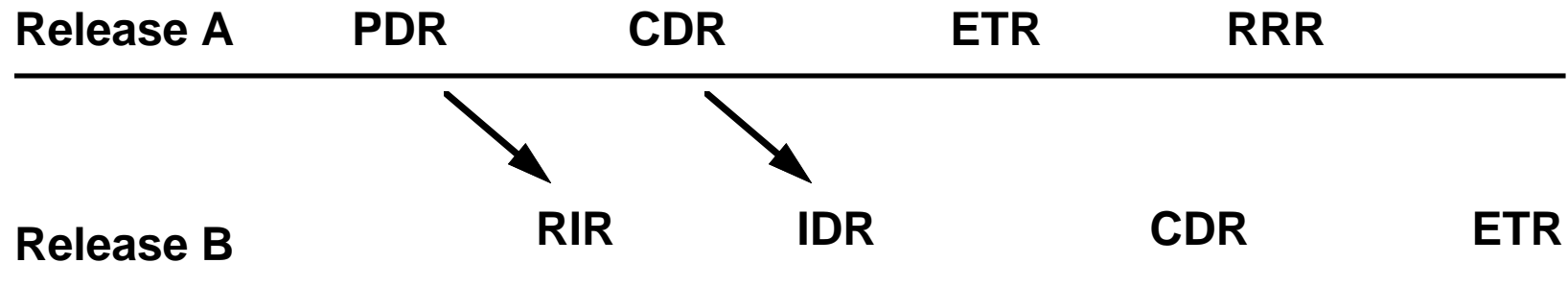
Design Synchronization



Release B design will be synchronized at RIR-B, May 15, CDR-A, IDR-B, TRR-A, CSR-A.

Rel-B design documents will reflect Rel-A CDR detail

- Rel B design effort will start with L4 definitions, and COTS trades for Rel B only services
- Requires a reasonable separation of IDR-B from CDR-A



Rel B Synch Points